

REMARKS

Applicants submit this Reply in response to the non-final Office Action mailed March 13, 2008. By this Reply, Applicants have amended claims 37, 38, 42, 49, 51, 52, 54-72, and have added new claims 73 and 74. No new matter has been added. Accordingly, claims 37-74 are currently pending, of which claims 37, 54, and 72 are independent.

In the Office Action, claim 72 was rejected under 35 U.S.C. § 101 as being purportedly directed to non-statutory subject matter. Claim 72 was also rejected under 35 U.S.C. § 112, second paragraph, as being purportedly indefinite. Claims 37-41, 43-47, 50-58, 60-64, and 67-70 were rejected under 35 U.S.C. § 102(b) as purportedly being anticipated by U.S. Pat. App. Pub. No. 2002/0032769 to Barkai et al. ("Barkai"). Claims 42, 48, 49, 59, 65, 66, 71, and 72 were rejected under 35 U.S.C. § 103(a) based on Barkai in view of EP 1150454 to Barkai et al. ("Barkai EP"). Applicants respectfully traverse all of the claim rejections and request reconsideration of the application, as presently amended.

I. Claim Rejection Under 35 U.S.C. § 101

In the Office Action, independent claim 72 was rejected under 35 U.S.C. § 101 as purportedly being directed to non-statutory subject matter. Office Action at 2.

By this Reply, Applicants have amended independent claim 72 to recite, *inter alia*, a "computer-readable medium storing instructions for execution by a processor" Applicants respectfully submit that the computer-readable medium

recited in amended independent claim 72 complies with the statutory requirements of 35 U.S.C. § 101.

It is well established that “a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory.” M.P.E.P. § 2106.01(I) (citation omitted) (emphasis added). Moreover, “[w]hen functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of descriptive material to be realized.” Id. at § 2106.01 (citation omitted).

For at least the reasons set forth in M.P.E.P. § 2106.01, Applicants respectfully submit that the “computer-readable medium storing instructions for execution by a processor . . . ,” as recited in amended independent claim 72, comprises a tangible, functional element that is not a computer program product embodying functional descriptive material, and thus, claim 72 is in compliance with 35 U.S.C. § 101.

II. Claim Rejection Under 35 U.S.C. § 112, Second Paragraph

In the Office Action, independent claim 72 was also rejected under 35 U.S.C. § 112, second paragraph, for purportedly being indefinite. Specifically, the rejection statement asserts that independent claim 72 is “drafted to include a reference to more than one statutory class of invention” by claiming “both an apparatus and the method steps of using the apparatus” Office Action at 3. By this Reply, Applicants have

amended independent claim 72 to be directed to a “computer-readable medium storing instructions for execution by a processor, the instructions when executed by a processor performing a method” For at least this reason, Applicants respectfully submit that amended independent claim 72 is directed to a single class of invention. Therefore, Applicants respectfully request reconsideration and withdrawal of § 112, second paragraph, rejection of claim 72.

III. Claim Rejection under 35 U.S.C. § 102(b)

In the Office Action, claims 37-41, 43-47, 50-58, 60-64, and 67-70 were rejected under 35 U.S.C. § 102(b) as being anticipated by Barkai. Office Action at 3. Claims 37 and 54 are the only independent claims included in the § 102(b) rejection based on Barkai. By this Reply, Applicants have amended independent claims 37 and 54, thereby obviating the rejection of these claims under § 102(b). To the extent, however, that the Examiner may consider rejecting amended independent claims 37 and 54 based on Barkai, Applicants respectfully submit that such a rejection would be improper because Barkai fails to disclose all of the subject matter recited in amended independent claims 37 and 54.

A. Amended Independent Claim 37

Applicants’ amended independent claim 37 is directed to a system architecture for managing a communication network, including, *inter alia*, “a base layer for proxying . . . interfaces and for decoupling [the] interfaces from management functions, [the] base layer comprising distributed process executors to execute in a distributed manner processes concerning management of said network, each process executor comprising

at . . . a workflow engine, a rule engine, and a combination thereof” Barkai fails to disclose or render obvious at least this subject matter recited in Applicants’ amended independent claim 37.

The rejection statement asserts that Barkai discloses “a system architecture for managing a telecommunication network . . . comprising: a base layer (figure 3, 5: warehouse tier 52) proxying said interfaces and decoupling said interfaces from management functions ([0057] - [0067])” Office Action at 3-4.

Without necessarily agreeing with the rejection statement’s assertions about what Barkai purportedly discloses, Applicants respectfully submit the Barkai does not disclose “a base layer . . . comprising distributed process executors to execute in a distributed manner processes concerning management of said network, each process executor comprising at least one of a workflow engine, a rule engine, and a combination thereof,” as recited in amended independent claim 37. Rather, Barkai discloses a warehouse tier 52, which provides an interface between the network elements and the agent modules in the agents tier 50. Barkai at [0057]. In particular, Barkai states that the warehouse tier 52 may include components, such as, “a network element translator 60, a database translator 68, a directory service translator 70, a message queue 72, an audit log 74, and an instrumentation manager 62. Id. Barkai employs distributed autonomous agents, wherein the proxy function and the management function are intrinsically intertwined. Thus, in contrast to Applicants’ independent claim 37, the warehouse tier 52 in Barkai fails to disclose the use of process executors suitable to execute workflows and/or rules in a distributed manner.

The advantages of having a proxy layer equipped with process executors are various. For example, resource proxies equipped with process executors may support any FCAPS (Fault, Configuration, Accounting, Performance, Security) functionality. Particularly, these components may "learn" new process definitions (workflows and rules) and run them when needed. Services offered by resource proxies run using process executors may include: port configuration, creating cross-connection, and modifying connection attributes. Each of these services may include sequences of basic commands to be sent and/or received to or by the equipment.

Also, a proxy layer equipped with process executors achieves a greater flexibility in managing changes to the information model used to represent a network equipment associated with the resource proxy. For example, the information model representing a network equipment may change in case of redesign of a network service provided through the network equipment. If any such change of information model occurs, it is sufficient to change a workflow or a set of rules for the process executor of the resource proxy, rather than rewriting or changing the code of the resource proxy itself. Moreover, using process executors in a resource proxy may allow modification of network equipment models without requiring code changes in the resource proxy.

Finally, the flexibility inherent in workflow and rule definition may permit the execution of processes on the network with reduced effort, including, for example, the introduction of new equipment or for provisioning.

For at least the above-outlined reasons, Applicants' amended independent claim 37 is patentably distinguishable from Barkai. Therefore, Applicants respectfully

request reconsideration and withdrawal of the § 102(b) rejection of amended independent claim 37 based on Barkai.

B. Amended Independent Claim 54

Amended independent claim 54 is directed to a method of managing a communication network, including, *inter alia*, “executing, in [a] base layer, distributed processes concerning management of the network, each of [the] processes comprising . . . workflows, rules, and combination thereof; and supporting distributed management functionalities via a support layer superposed to [the] base layer and comprising a plurality of agents co-ordinating operation of [the] base layer.” Applicants respectfully submit that Barkai does not disclose or render obvious at least this subject matter recited in independent claim 54.

The rejection statement asserts that claim 54 is a method claim that corresponds to “system claim[]” 37, and therefore, method claim 54 has been rejected based on the same purported rationale as “system claim[]” 37. Office Action at 6. For reasons at least similar to those outlined above with respect to independent claim 37, Barkai fails to disclose or render obvious at least the above-outlined subject matter recited in Applicants' independent claim 54. Therefore, independent claim 54 should be patentably distinguishable from Barkai, and Applicants respectfully request reconsideration and withdrawal of the § 102(b) rejection of independent claim 54 based on Barkai.

C. Rejection of Dependent Claims under § 102(b) based on Barkai

In the Office Action, dependent claims 38-41, 43-47, 50-53, 55-58, 60-64, and 67-70 were rejected under 35 U.S.C. § 102(b) as being anticipated by Barkai. Each of those claims depends from a corresponding one of independent claims 37 and 54, and thus, they should be patentably distinguishable from Barkai for at least the same reasons as independent claims 37 and 54. Therefore, Applicants respectfully request reconsideration and withdrawal of the § 102(b) rejection of claims 38-41, 43-47, 50-53, 55-58, 60-64, and 67-70.

IV. Claim Rejection under 35 U.S.C. § 103(a)

Claims 42, 48, 49, 59, 65, 66, 71, and 72 were rejected under 35 U.S.C. § 103(a) based on Barkai in combination with Barkai EP. Office Action at 7. Claim 72 is the only independent claim listed in this rejection, and Applicants have amended independent claim 72, thereby obviating the § 103(a) rejection of that claim. Applicants respectfully submit that Barkai and Barkai EP, regardless of whether they are viewed individually or as a whole, fail to render the subject matter recited in amended independent claim 72 *prima facie* obvious.

A. Amended Independent Claim 72

Amended independent claim 72 is directed to a computer-readable medium storing instructions for execution by a processor, the instructions when executed performing a method of managing a communication network, the method comprising, *inter alia*, "executing, in [a] base layer, distributed processes concerning management of said network, each of said processes comprising at least one of workflows, rules, and a

combination thereof” Neither Barkai nor Barkai EP, taken alone or in combination, discloses or renders obvious at least this subject matter recited in amended independent claim 72.

The rejection statement acknowledges that Barkai “does not expressly disclose the architecture . . . , wherein said resource proxy modules are configured for running processes using a process executor.” Office Action at 7. In an effort to remedy this acknowledged deficiency of Barkai, the rejection statement asserts that Barkai EP “discloses [that] base layer (device components) includes process executor (figure 3; [0043]-[0044]),” and that “it would have been obvious . . . to combine the method disclosed by Barkai et al (US) with the method disclosed by Barkai et al (EP) regarding base layer includ[ing] a process executor,” purportedly because “the combination would have . . . provide[d] a system-wide top-down flow with each DC performing its independent computations which collectively achieve the external request (Barkai et al (EP), [0044], lines 4-7).” Id.

Applicants respectfully disagree with the rejection statement’s obviousness assertions. In particular, Applicants respectfully submit that Barkai EP does not disclose or render obvious, “executing, in [a] base layer, distributed processes concerning management of said network, each of said processes comprising at least one of workflows, rules, and a combination thereof,” as recited in independent claim 72.

The rejection statement asserts that the “base layer (device components) includes process executor (figure 3; [0043]-[0044]).” Office Action at 7. The rejection statement apparently misinterprets the Device Components of Barkai EP as purportedly being process executors because they work stepwise following a flowchart, as

illustrated by they exemplary decision-routing DC framework of Barkai EP Figure 3.

Office Action at 7-8. However, the Device Components of Barkai EP do not correspond to Applicants' recited process executors. Rather, the Device Components of Barkai EP correspond to "wired logic" components. These Device Components implement a predetermined set of steps as described in the flowchart, requiring reprogramming to implement a new set of steps.

Further, Barkai EP fails to disclose how the workflow could be changed. The flowchart of Barkai EP Figure 3 is a representation of the steps to be followed by an entity, the Device Components in this case. Barkai EP requires reprogramming the proxy to implement a new "flowchart," i.e., a different set of steps for its operation. There is nothing in Barkai EP to support the assertion that "workflows" or "rules," as recited in independent claim 72, can be provided to the Device Components and used by them to change their operation sequence. Thus, Barkai EP lacks disclosure of "executing, in [a] base layer, distributed processes concerning management of said network, each of said processes comprising at least one of workflows, rules, and a combination thereof," as recited in independent claim 72.

Therefore, Barkai and Barkai EP, regardless of whether they are viewed individually or as a whole, fail to disclose or render obvious all of the subject matter recited in independent claim 72.

For at least the reasons outlined above, Applicants respectfully submit that amended independent claim 72 is not *prima facie* obvious based on Barkai and Barkai EP, regardless of whether those references are viewed individually or as a whole. Therefore, Applicants respectfully request reconsideration and withdrawal of the

§ 103(a) rejection of amended independent claim 72 based on Barkai in view of Barkai EP.

B. Rejection of Dependent Claims under § 103(a) based on Barkai and Barkai EP

Claims 42, 48, 49, 59, 65, 66, and 71 were rejected under 35 U.S.C. § 103(a) based on Barkai in view of Barkai EP. Each of those claims depends from one of independent claims 37 and 54, and thus, they should be patentably distinguishable from Barkai and Barkai EP for at least the same reasons as independent claims 37 and 54. Therefore, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of claims 42, 48, 49, 59, 65, 66, and 71.

V. Conclusion

For at least the reasons set forth above, amended independent claims 37, 54, and 72 should be allowable. Dependent claims 38-53, 55-71, 73, and 74 each depend from a corresponding one of allowable independent claims 37 and 54. Therefore, each of those dependent claims should be allowable for at least the same reasons their corresponding independent claim is allowable, as well as by virtue of their additional recitations of novel and non-obvious subject matter.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application, withdrawal of the claim rejections, and timely allowance of pending claims 37-74.

If the Examiner believes that a telephone conversation might advance prosecution of this application, the Examiner is cordially invited to call Applicants' undersigned attorney at (404) 653-6465.


Applicants respectfully submit that the Office Action contains a number of assertions concerning the related art and the claims of the present application. Regardless of whether those assertions are addressed specifically herein, Applicants respectfully decline to automatically subscribe to them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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